

**TRANSLATION****PATENT COOPERATION TREATY****PCT****INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>FP04-0343-00</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/016255</b>	International filing date ( <i>day/month/year</i> ) <b>02.11.2004</b>	Priority date ( <i>day/month/year</i> ) <b>19.11.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>G03F7/004, 7/027, 7/028, H05K3/06</b>		
Applicant <b>HITACHI CHEMICAL CO., LTD.</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.
3.	This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4.	This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- sheets \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement		
	Novelty (N)	Claims <u>3, 7, 8</u>	YES
		Claims <u>1, 2, 4-6</u>	NO
	Inventive step (IS)	Claims _____	YES
		Claims <u>1-8</u>	NO
	Industrial applicability (IA)	Claims <u>1-8</u>	YES
		Claims _____	NO
2.	Citations and explanations (Rule 70.7)		
	<p>Documents 1 to 5, indicated below, are cited in the international search report.</p> <p>Document 1: JP 60-238830 A (Hercules Inc.), 27 November 1985, claims 1, 8 and 12; page 4, lower right column, 10th line from the bottom to page 5, upper left column, line 12; and examples 1, 2 to 5, 14 and 15 to 16 &amp; US 4563413 A &amp; US 4666824 A</p> <p>Document 2: JP 2-135351 A (Hoechst AG.), 24 May 1990, claims 1, 6 and 7; page 8, upper right column, lines 10 to 16; and example 1 &amp; EP 359060 A2</p> <p>Document 3: JP 2003-295426 A (Agfa-Gevaert N. V.), 15 October 2003, claims 1 to 3; paragraphs [0020], [0040], [0055] and [0058]; and example 5 &amp; EP 1349006 A1</p> <p>Document 4: JP 2000-214583 A (Hitachi Chemical Co., Ltd.), 04 August 2000, entire text (Family: none)</p> <p>Document 5: JP 5-11439 A (Fuji Photo Film Co., Ltd.), 22 January 1993, claims 1 to 4 and paragraphs [0017], [0039], [0045], [0053] and [0054] &amp;</p>		

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US 5328803 A

Claims 1, 5 and 6

The inventions set forth in claims 1, 5 and 6 are disclosed in documents 1 to 3; therefore, the inventions in question lack novelty and do not involve an inventive step.

Claim 2

The invention set forth in claim 2 is disclosed in document 3; therefore, the invention in question lacks novelty and does not involve an inventive step.

In addition, the invention set forth in claim 2 lacks novelty and does not involve an inventive step in the light of document 4 or 5 and documents 1 to 3.

Neither document 4 nor document 5 discloses component (D); however, component (D) is a well-known additive, as disclosed in documents 1 to 3.

Such being the case, it would have been easy for a person skilled in the art to conceive of combining component (C) set forth in claim 2, which is disclosed in documents 4 and 5, with component (D) set forth in claim 2, which is disclosed in documents 1 to 3.

Claim 3

The invention set forth in claim 3 does not involve an inventive step in the light of document 4 and documents 1 to 3.

Document 4 does not disclose component (D); however, component (D) is a well-known additive, as disclosed in documents 1 to 3.

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Box No. V

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Such being the case, it would have been easy for a person skilled in the art to conceive of combining component (B) set forth in claim 3, which is disclosed in document 4, with component (D) set forth in claim 3, which is disclosed in documents 1 to 3.

Claim 4

The ranges that are delimited for the acid number and the molecular weight in claim 4 are substantially disclosed in documents 2 and 3; therefore, the invention set forth in claim 4 lacks novelty and does not involve an inventive step.

In addition, the invention set forth in claim 4 lacks novelty and does not involve an inventive step in the light of document 4 or 5 and documents 1 to 3.

Neither document 4 nor document 5 discloses component (D); however, component (D) is a well-known additive, as disclosed in documents 1 to 3.

Such being the case, it would have been easy for a person skilled in the art to conceive of combining component (C) set forth in claim 4, which is disclosed in documents 4 and 5, with component (D) set forth in claim 4, which is disclosed in documents 1 to 3.

Claims 7 and 8

The invention set forth in claims 7 and 8 does not involve an inventive step in the light of document 4 or 5 and documents 1 to 3.

Neither document 4 nor document 5 discloses component (D); however, component (D) is a well-known additive, as disclosed in documents 1 to 3.

Such being the case, it would have been easy for a

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person skilled in the art to conceive of employing component (D), which is disclosed in documents 1 to 3, in the method for forming a pattern upon a circuit substrate, which is disclosed in documents 4 and 5.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 1 to 6 are not fully supported by the description.

The compositions are characterized by well-known components, and only a portion of the possible combinations of a binder polymer, a photopolymerizable compound and a photopolymerization initiator are specifically set forth in the description.

Furthermore, the method that employs the compositions in question is not mentioned anywhere other than the disclosure in claim 8.